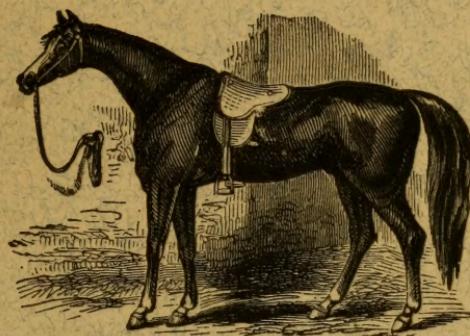


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THE

HORSE SHOER'S COMPANION

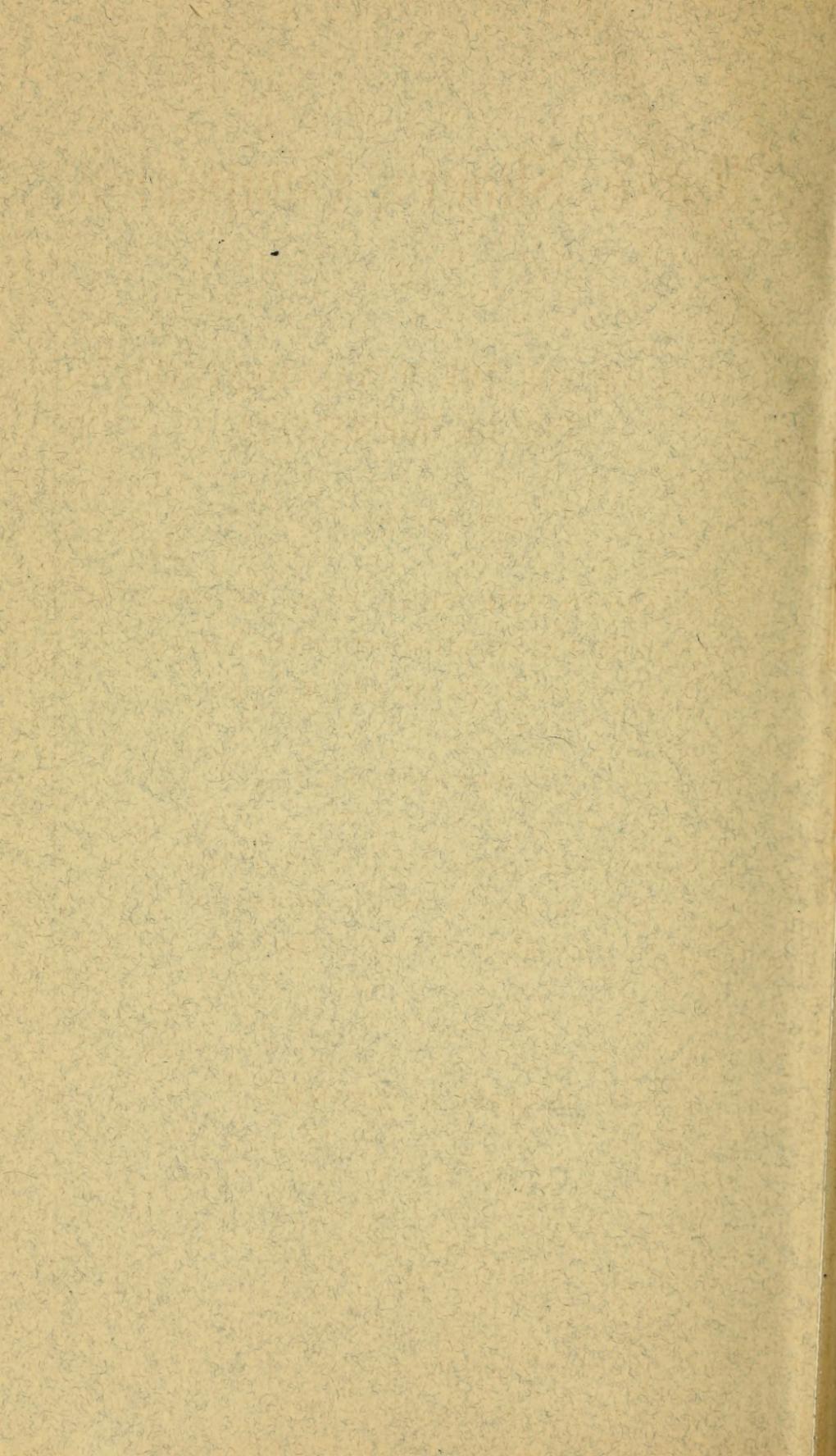


— AND —

GUIDE FOR THE MANAGEMENT AND
CURE OF HORSES' FEET.

By ISAAC A. CAVANAGH.

CUMBERLAND, MD.
DAILY TIMES PRINT,
1881.



THE
Horse Shoer's Companion

AND

GUIDE FOR THE MANAGEMENT AND
CURE OF HORSES' FEET,

WITH INSTRUCTIONS ON

DISEASES OF THE FEET, WAYS OF HOLDING
WHILE BEING SHOD, ON THE CHOICE
OF FEET, STABLING, ETC., ETC.

TOGETHER WITH A

VARIETY OF OTHER USEFUL AND PRACTICAL
INFORMATION TO HORSE SHOERS AND
OWNERS OF HORSES GENERALLY.

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By ISAAC A. CAVANAGH;

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TO THE READER.

Before proceeding to read the following treatise on horse shoeing, allow me to make a few remarks by way of introduction.

In reading the following pages, you will notice that I do not mean to advance any new theory or “new fashion” way of shoeing—but simply to endeavor to explain the principles and practices of the art—more particularly, to the unskilled or young beginners, so that they may know how horse shoeing ought to be done. Owners and those in care of horses will undoubtedly find many parts in the subsequent pages that may be particularly commended to their especial attention. It will give them an idea of when, and how, their horses should be shod; together with other useful information in regard to the proper condition and care of horses’ feet. Farmers, and others, who are not professional horse shoers, but who, nevertheless, occasionally nail on a shoe, will find in its pages many items that will be of great service to them in assisting them to shoe more correctly, and, also, of keeping in good condition their horses’ feet. To the *good, practical and experienced* horse shoers I do not mean to dictate to, or offer any instructions whatever. It would be presumptuous and silly conceit in me were I to think of doing so. Those who are really good horse shoers have no need of a treatise like this—but believing that there are many who are not good shoers, who might yet be open for some improvement, to such I would think that a few hints would not be amiss. It has often occurred that horses shod in an inferior manner, have been crippled, and thereby ruined for life. This work is not calculated to supply all the knowledge in regard to horse shoeing; still my aim has been to contribute a little toward it—or to give all those who may be interested an opportunity of knowing

WHAT I KNOW ABOUT HORSE SHOEING.

I cannot expect that it will entirely satisfy the wishes of all who may read it, but I sincerely hope that its contents may prove of some benefit. Therefore, if there be any information, or useful idea gained, on the subject of which it treats, my desire will be fully attained.

ISAAC A. CAVANAGH.

OCEAN, Md., 1881.

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HORSE SHOER'S COMPANION.

Horse Shoeing.

There is probably no part of a horse that requires more care and attention than his feet, and in order to protect them from injury, and to assist him in traveling and hauling heavy loads, we must have shoes made for the protection of his feet, as well as for his assistance and comfort in traveling. It is evident that if most horses had not shoes on that they would soon be rendered useless by their hoofs breaking and wearing down, owing to the hard roads and constantly heavy pressure that the feet are subject to, particularly in case the horse is drawing heavy loads.

In the first place, then, allow me to draw your attention to the fact that you must make the shoe fit the foot, for it too often happens in careless and hurried shoeing that the foot is made to fit the shoe, which is most pernicious and evil in its results, for it often binds the foot, and, therefore, hinders it from growing in its natural form. It results in an injury to the sole of the foot by undue pressure; is also very often a first cause for the seating of corns in the foot, and moreover, such shoeing, if continued, will eventually contract and deform the feet, thereby laying the foundation for troublesome ailments which may result in permanent disease. The shoes should be the proper size and shape and made to suit the particular condition of the feet and the various degrees of use that will be required of them. We know that the horse's foot expands when his weight is thrown on it, and contracts when it is taken off. Therefore it is essential that we must be very particular in making the shoe fit the foot and, also, in the manner of nailing it on, if we are not, it is very likely that the shoe will be put on very indifferently and in such a manner as will not allow the free expansion and contraction of the foot as nature requires, which will thereby cause uneasiness and injury to the animal as long as it remains on.

It would be well if every horse shoer understood well the anatomy of a horse's foot, if they did, they would have a better idea of preparing the foot for shoeing, in driving

the nails and the shape of shoes that would be best suited for any particular kind or condition of foot, both in health and disease.

I will now endeavor to give instructions how to make a shoe, although believing at the same time that written instructions will not assist any one much in making a shoe, for it will take experience, time and practice with the use of tools before one can expect to make much progress in making horse shoes, but still it may impart some little wrinkles or ideas that may be of some use to a beginner or one doing their own shoeing who never learned the trade.

There are plenty of men who can make a shoe better than the writer of this; but, as was remarked in the beginning, it is not the desire to offer any instruction to such, but as there are undoubtedly those who do need information and would be glad to receive it from any quarter, to them then I mean to address myself.

On Making the Shoes.

As to making shoes, there can only be given a general outline as to the manner of going through the process of hammering them into shape. You will hardly find two blacksmiths that can make shoes exactly alike; each one have their own peculiar way of hammering them into form. To be able to make a good and well finished shoe, it will be important to have good early training in the practice of making shoes, together with a natural inclination for the work. Having these two requisites it will be an easy matter to make good shoes. But if on the contrary there has been no early training or natural ability to do the work it cannot reasonably be expected that there can be much progress made in the art. However, there are exceptions, for it is known that there are men who had every chance of becoming good workmen, but yet have failed to come up to that degree of excellence that might be expected of them, while others again, with not half the advantages of learning, have become by their close attention to work and good natural talent among the foremost in their vocation. If a man wishes to succeed well in any branch of the mechanical arts, he must exert himself to work with a will and a perseverance that will not flinch nor be put back by any seemingly insurmountable obstacles that may appear

to be in his way. He must push on and persevere patiently. Then, having done so, he will have the satisfaction of seeing all hindrance to success pass away and the road to prosperity in his calling made clear and bright.

Since the year 481, at which time it is said that iron horse shoes were first made, there have been a vast amount of inventive genius used and instructions given so as to make the feet of all horses shaped so there may be a rule or pattern adopted for the formation of the feet to a regular design instead of allowing nature to take its course in its natural growth and formation. The appliances are innumerable that have been proposed and used to take the place of our ordinary iron shoes. We have had shoes made of india rubber, felt, wood, copper, steel, etc., etc., but, as yet, we have to fall back on the old common iron, which through centuries of use have been proven beyond a doubt to be the best material as yet known to shoe horses with.

You may learn as much as you like from books, however theoretically excellent, still you must have that peculiarly practical knowledge that can note the variations in the growth and formation of feet so as to be able to make any required change in the design of the shoe that may be needful.

Before beginning to make a shoe you will have to pick out the iron that will be the most suitable for the kind of a shoe you want to make—that is, if you want to make a heavy shoe you will require large size iron to make it, and if a light one, you will have to choose the iron accordingly. It will save a great deal of time and labor by having the iron to suit the size of the shoe that you want to make, and besides will be more readily put into shape. I would not advise you to take thick heavy pieces of iron and forge them into shoes, as they sometimes do in country shops. There is no necessity for such mulish sort of work when it can be avoided by having the iron to suit the size of the shoe required. But perhaps you may say that the blacksmith may not have much to do and may probably be waiting anxiously for the approach of some traveler with the expectation that his horse may have cast a shoe; or the farmer's boy who may be going to the mill with his grist to have it ground and his harrow pins sharpened at the forge. Well, in such cases, when time is not a matter of much importance, it may do to make shoes out of almost any piece of iron that can be found large enough to be forged into a shoe; but still it must be remembered

that the time could be more profitably employed and, moreover, that every piece of iron is not fit to be worked into shoes. There is iron made for this particular use, and it should be used in preference to all other kinds. Therefore, always get a piece of iron that will suit the t'ie shoe, both in quality of material and size, then you may expect the work to be neatly and profitably done. The size of the iron commonly used for making horse shoes is one inch by one-half inch. You will first measure the bar off into suitable lengths, according to the size of the shoe required—say from nine to fourteen inches in length. When you are cutting the bar up you can mark the centre of each piece with the corner of the cutter, it will guide you to have the pieces bent exactly in the centre. Bend the pieces around to about square and then they will be ready for forging into shoes.

Before making a shoe you will require to have a tongs to hold it, and, therefore, I think I had better say something about the shape of the tongs required. You will make it about twenty inches long, have the jaws not over an inch and a half in length, and hollow them lengthwise in the centre as then they will hold the iron much better. You can make the "legs" out of half-inch round iron. Take hold of the piece with the tongs about half-way between the toe and the heel, and when ready for forging place it on the face of the anvil edgewise, and commence by striking three or four blows along on the end of the piece. Then quickly bring it on the beak edgewise and begin hammering at the centre or toe, at the same time gradually drawing it in towards you until you have it hammered to the end. Now bring it quickly to the face of the anvil, holding it flat on it, and commence at the toe, again hammering or flattening it along to the heel. The helper will now stop striking, and you will take it again to the beak of the anvil striking yourself and setting it to the shape you want it; once more take it to the end of the anvil and flatten it off with your hammer. You must remember while going through all this work to have the inside of the shoe thinner than the outside, for the reason that it will hinder the shoe from pressing on the sole of the foot, particularly flat-footed horses. Next turn it over and place the fuller on it about an inch or thereabouts from the end of the heel and about three-sixteenths of an inch from the outside edge. The helper will strike the fuller quickly, and while he is doing so gradually draw it around to nearly the centre. Keep the side of the fuller that is towards

you raised a little, so that it will not catch in the iron while you are bringing it around. Now if the shoe be still hot enough you can stamp the holes, placing the first one from about two and a half to three and a half inches from the heel, according to the size of the shoe. Stamp all the holes at an equal distance apart from each other ; except there may be a bad or broken place in the hoof, and, in such case it may be necessary for you to move the holes accordingly. Punch the holes through with the pritchel, and be sure to leave no burs or raised parts around them, but to have the shoe nice and smooth all round on the inside—on side next to foot.

Having done this you will now have one side of the shoe finished ; the other side you will do the same—as I have explained—except that you will begin fullering at the toe instead of the heel. The outside of the shoe is usually turned first, but it don't matter much which side of the shoe you turn first so that you make a good shoe. All blacksmiths do not turn shoes alike, nearly every one has their own peculiar way of working and doing work.

When you are turning shoes take care not to bend the side too much at the toe, if you do, in all probability when you have the other side bent the same way you will very likely have it too wide across at the toe. It is always easier to widen a shoe at the toe than to make it narrow. The greater number of the shoes now used are made by machinery, and are as good, and I believe even better than those made by hand. Owing to the machine made shoes being so generally used, there are consequently a great many horse shoers now who can hardly make a good shoe. Every blacksmith who shoes horses ought to be able to make a good and perfect shoe with his own hands, for then he can have a shoe to suit any kind of a foot that might require a special shoe made for it. It is an evident fact that all horses have not got good, sound feet: some have deformed, broken, weak and flat-feet, and in such cases it is requisite for the shoer to understand the way to make a shoe that will be suitable for the foot and easy for the horse to walk on. Therefore I would say to every young beginner at horse shoeing: try and learn to be able to make a good shoe, for then you can do your work, and be qualified to do it, under all circumstances. I believe now that I have said all that there is any necessity for me saying on making shoes. As I have before remarked, there are different kinds of shaped shoes required

for particular kind of feet, so that it would be of no use, and moreover it would be impossible, for me to describe the way to make all the differently shaped shoes, for as there are so many bad and deformed feet to be shod, that I think it would be useless for me to give directions as to how the work should be done in shaping such shoes, for as it would be directly indispensable for to see the foot in order to make the particular kind of shoe that would be requisite for it.

Hence there would not be any use in giving specific directions. And again, it is above all essential that one must have practical experience in making shoes before being able to make and fit a shoe for every peculiarity of the foot.

Further on I shall have something to say on the shape of shoes suitable for deformed and diseased feet, and the size and shape appropriate for particular horses.

How to Prepare the Foot for Shoeing.

We come now to a subject that requires a great deal of attention, and I can say in many instances it receives but a very small amount of the consideration that it properly and needfully requires. It is very important that proper attention be given to the preparation of the foot for shoeing, because when the hoof is properly treated for all irregularities in the growth and for the various diseases and injuries that it is constantly subject to, it cannot but be a benefit to the horse in every particular to have his feet attended to in regard to preparation for shoeing. It is reasonable to suppose, and it agrees with good common sense, that a horse will travel better with his feet properly trimmed and well seated in his shoes, than in any other manner.

I will now proceed with my remarks in regard to preparing the foot. If a horse has a strong, well-shaped foot with the sole well arched or dished, you will not have much trouble in preparing it for shoeing; with such a foot as with all others, you will commence by cleaning out the cleft of the frog, and between the frog and the bars. Having done this you will then trim all the rough and detached parts of the frog away. There will be no necessity

for you to slice or cut away any of it, because, generally speaking, it will naturally wear away without having occasion to cut it; there is another and greater reason, too, why you should not be too ready in cutting away the frog, and it is this: the frog, by its soft and pliable nature, acts, as it were, like a cushion under the foot; it also protects the foot from the jar and hard knocks that it is continually subject to by going over hard roads. It assists, too, in the expansion of the foot and helps to support the weight of the animal. By cutting it you lay bare the inside or sensitive part of the frog, it will therefore nearly lose all its moisture, get dry and hard as the hoof, and be almost useless for the purpose it was intended for by nature. By carelessly and uselessly cutting down the frog you lay bare a part of the foot that requires a good and strong protection. There is a joint which is called the "navicular joint" about an inch or an inch and a quarter behind the point of the frog; it is very easily strained or bruised from sudden concussion, and if injured is very difficult to cure; therefore, if for only this do not cut the frog, for by doing so you leave exposed this joint which needs to be so well protected. Nature will do the trimming of the frog in nearly all cases and the horse will be better and more serviceable in every particular. After having trimmed up the frog, cleaned out between the bars and the frog, you will then proceed to pare down the foot, if it needs any. If it be a weak, flat-foot it will not require any paring at all, but just to merely cut off any inequality of the sole. It is very well known that a horse with a flat foot is more liable to have the sole injured by coming in contact with stones, etc., in the road, than one with a high concave foot. It is often necessary to put a stout piece of leather or other substance between the foot and the shoe of a weak, flat-footed horse to protect the sole of the foot from being bruised or injured, such injury often resulting in the crippling of the animal for life. Such a foot, then, requires no paring; but only just what is necessary to make the foot level all around. I do not mean, though, that you shall make the sole level with the outside of the hoof or rim, because with some feet it would be utterly impossible to do it without crippling the horse. The soles of some flat-footed horses are a great deal higher than the outside rim of the hoof, therefore it would not do to level the sole of such a foot with the outside—if you would, you would surely do the horse an injury. You must then have the

foot as level as you can on the outside or rim, so that the shoe will bear evenly and nicely on it all around. (The kinds of a shoe to suit such a foot will be described hereafter.) Cut down the bars of the foot about even with the sole, but do not cut any off on the inside or side next to the frog—leave that alone. I will give you my reasons too, why I think you should not cut any there. The bars hinder the foot from closing in upon the frog, and consequently if you cut them in the inside you weaken them and leave the foot liable to narrow in or become contracted, and also cutting down between the bars and the frog at the heel will tend to do the same thing. I have seen shoers cutting down or “opening out the heels” until they would draw the blood. I cannot see what motive they can have for cutting away the hoof there for, it surely cannot be with an idea of doing the foot any good, for on the contrary, in my opinion, it will do a great injury, because it takes away from that part of the hoof the strength required there to keep the heels from wiring in or becoming contracted, which in many cases lays the foundation of permanent lameness and incurable disease of the foot. People often wonder why their horse gets lame, they see no outward sign that would cause it, and yet they are so surprised that he is lame they will think probably that it is in the knee or the shoulder; it may be, too, for all that, but in very many cases there is no doubt but it has been caused by too much cutting away between the bars and the frog.

Before beginning to prepare the foot for shoeing it would be well for you to stand around partly in front of the horse so as to see how his feet looks, if the foot has grown out long and thin and irregular, it will require some trimming so as to bring it to a good and natural looking shape, but you must mind not to cut off too much, for if you did it might cause the horse to go along in a stumbling manner by not being used to the change. If the foot project out thin and uneven, trim it off also. In a word, trim the hoof *all around* to what you think ought to be its natural shape, keeping in mind, also, to not cut any away that would interfere with the natural formation of the foot or that would do an injury to the crust. Of course you cannot put a good-looking foot in the place of a bad-looking one, but you can improve the looks considerably by careful trimming and proper management. A good, strong well-shaped foot you will not have much trouble with; al-

most any one could put a shoe on such a foot if they had a shoe that would fit, because there is not much danger of injuring the foot, providing the nails come out in any sort of proper way. While paring down the soles of the feet remember that you must not cut away too much. You *may* pare the foot down until it will yield to *hard* pressure from your thumb, but remember not any thinner; do not pare it down until it would yield to light pressure, for if you did it would be too thin and consequently would be bruised by stones and other hard substances on the road. I would not advise you to be too anxious in paring down the sole of any foot, for it is not often you will find it too thick, generally all that is necessary to be done is to remove all the uneven and detached pieces. If a horse has weak flat-feet they will be sore and tender and the horse will be very uneasy while standing on them barefooted; with such feet you had better take only one shoe off at a time and shoe that foot before taking off another, he will stand better and quieter on the old shoe than if barefooted. A horse with a good, strong, high-foot will generally stand as well with his shoes off as on, but it will be as well for you to keep them on, it will hinder him from breaking his hoof by scraping and jumping around and you can only shoe one foot at a time anyhow. In taking off shoes be particular in having all the clinches of the nails cut all around the foot. If the shoes be tight on do not pull or jerk them too hard; first get your pincers and take a hold of the shoe near the heel, give it a light and smart jerk and if you have loosened it you can take hold of the nails and pull them out. If the shoe be tight on you had better pull the nails out with the pincers, by doing so it will not hurt the horse or injure his hoof as much as if you would pull them out with the shoe, but if the shoe be loose after having cut the clinches you can pull shoe and nails all together.

The feet of some horses are extremely hard and dry and it is very difficult to cut them with the paring knife. To soften them so that you can cut them more easily get a light piece of flat iron, heat the end of it hot and place it on the sole of the foot moving all around on the parts that need paring, it will soften the hoof and not do it a bit of injury, because the parts you have heated will be all cut off, leaving it hard and solid underneath and easily pared down to what is wanted. A hot iron laid on a horse's foot will soften and disintegrate the hoof, therefore

it would be better for you not to heat the sole of a thin or flat-foot, it being thin and sensitive you would injure it by doing so, because you cannot cut off to the depth the heat has penetrated. A great many people have a peculiar notion that heating a horse's hoof will injure him, they look at it, also, as being a horrid and cruel action to place a hot iron on a horse's foot, but reader, do not mind these croakers, they know nothing about the matter; as I have said, I would not advise you to heat the sole of a flat-footed horse, neither would I advise you to heat any foot that would be soft enough to cut with the knife. I only mean those feet that are so *very* hard that they can hardly be cut, with such a foot, I say, heating them with a hot iron so as to soften will not hurt them, because all that is heated or softened is cut off with the knife which leaves a sound, solid bearing underneath; I would like to know then how the foot can be injured. But as I have said before, there is no necessity for applying heat to any part to soften it except it be so *very hard* that it can hardly be cut, and then with such a foot, I contend, that moderately heating it as I have described will not injure in the least.

Always pay attention and see if there are any corns in the feet when you are paring them down. Corns are most frequently found in low, weak heels and flat-feet, a horse having such feet it is hard to keep them away, but generally corns are caused by negligence on the part of the smith, the groom and the owner. They mostly occur in the inside heel, in the angles between the bars and the quarters, there being more weight thrown on the inside heel and it being weaker than the outside it is more subject to them. They are principally caused by the pressure of the foot on the shoe together with inferior fitting. The shoe should not be kept very long on a horse that has corns in his feet, they should be removed every two or five weeks (according to the extent of the disease,) cleaned out and dressed up. By carelessness in paring the hoof the angle between the bars and the quarters are left as high or higher than the outside crust, thereby having the pressure there instead of on the hoof or crust where it ought to be. If they be recent corns they can be easily cured by careful shoeing. If then the corns be recent all you have to do is to pare down between the bars and the quarters just so that the shoe will not press on the corns, then with a small paring knife cut out the diseased matter, taking care not to wound the sole or cut any more of the sound part

than you can help, if there is no blood or matter underneath all that is necessary to be done is to fill up the hole with a tar and tow mixed or something of that nature that would keep it soft. If they are slight and of just a reddish appearance you can cut them out a little and heat the end of a small rod and rub it over them slightly, but when the corn extends down into the foot and when there is blood and matter there, and in some cases actually rotten, it has very likely turned to Quittor, for which disease it will have to be treated. I do not propose to lay down any treatment for diseases of the horse, that I think would be off my subject. The treatment for the diseases of the horse can be found in Youatt or Mayhew on diseases of the horse, two very good books.

Before I close this subject allow me to remind you (so that you may remember well,) that you should always be careful in cutting and paring down horses' feet, for carelessness in this regard is often the cause of a great deal of injury, and let me add, also, that you should be always careful in paring down *any* foot, for if you are not (particularly if you are not acquainted with the character of the foot,) you might pare it down too thin before you would be aware of what you were doing. I have done this myself through carelessness, and therefore I know whereof I speak. A good, stout, strong, healthy sole is what a horse ought to have, and therefore you ought to always try to have his feet as near that condition as possible.

The Size and Shape of Shoes

Suitable for Particular Horses, and the Kind Suitable for Deformed, Weak and Diseased Feet; also, Cutting and Overreach.

There are a great many different shaped shoes required in shoeing; some have to be made light and others heavy; others again suitable for diseased, deformed or weak feet, and for every particular or special service. A common, medium-sized shoe will do for any sound well-shaped foot, but it must be made to agree with the size and weight of the horse, also. A horse that does light work, or no work at all, will not require to have as heavy a shoe as one that has to do hard work. Racers and trotters, and horses like them, having a good sound foot, I think a light, narrow

shoe, without toe or heel calks would be the most suitable except that the horse has some peculiarity in travelling, or some very rough roads to travel over. In such cases it may be desirable to make shoes to suit accordingly. In shoeing you will have to act very often according to the notion or fancy of the groom or owner. They will desire to have their horse shod in a manner to please themselves, notwithstanding what you may say or think about it. If a horse has low heels, it would better for you to turn calks on the shoes. I have seen horses with heels so low, that with flat or spring heel shoes on, the frog of the foot would be a great deal higher than the heels of the shoe, therefore, throwing almost the entire weight upon the frog. By thickening up the heels of such shoes, so as to bring them on at least a level with the frog (which they ought to be) would probably make them clumsier and heavier than they should be. It would be better then for you to turn up neat heels on such shoes, than for you to thicken them up. You must bear in mind that the shoe ought not to be any lower than the frog, then it will be defended from the wear, bruises and injury it would receive, if it came upon the ground with the full force of the foot.

For a work horse, have a good stout shoe—not too heavy though; you can form a good idea of the weight the shoe ought to be by the size of the horse. Have toe and heel calks on, and a clip turned up at the toe. It is better always to have a clip on the toe of a shoe, particularly on shoes for working horses, it keeps the shoe steadier on the foot and from being knocked back. If the calk be welded on the shoe square with the toe, and the clip turned up neatly in the centre of the toe, the shoe will stay on longer, and if it be fitted on well will look better and neater than without clips. It is customary with some shoers to turn up clips on the sides of the shoes at the quarters. For my part I think that it is wrong altogether to do so; it may do very well to put a clip on one side when the horse pitches out or in, as the case may be; with such a foot, I do not think a good broad clip on the side of a shoe would do any harm but, on the contrary, would do some good, because it would keep the shoe steadier and from twisting around on the foot. I have often put clips on the side of shoes myself, but in no case would I wish to have them on both sides of the shoe; I think it is very wrong to do so, because having clips on both sides of the shoe it will have a tendency to bind or squeeze the

foot together in such a manner as, in my opinion, will really be the cause of serious injury; it will have the foot bound up perfectly tight, and when the weight is thrown on it, there is but little chance for the free and natural-like action of the foot. If this way of shoeing is pursued in it will eventually cause the foot to narrow in or contract, consequently causing lameness and, perhaps, make the horse worthless for life. If the hoof be broken and you think you cannot keep a shoe on without the aid of clips on both sides of the shoe, if you could possibly do it, it would be better for you to turn the horse out, or let him rest until such time as the hoof would grow again.

You will see horses that sometimes walk on the edge of their feet—so much so, that the other side will hardly touch the ground. It is customary in shoeing such feet to turn up only one calk on the shoe, leaving the other one flat. The calk is put under the low heel for the purpose of raising that side up so that the weight will come down more evenly on the foot. This may be all very well, but turning up only one heel on a shoe, I think, ought not to be done, for I believe that it feels awkward under a horse's foot, and besides that, might be the cause of straining or uncomfortable jarring of the foot. I think a better plan would be to forge that side of the shoe thicker than the other side, or if you have the shoe made, you can hold it in the vise and thicken it up by striking it on the end, or you can chamfer out the end and turn it over flat; you can then leave it as it is, or weld it and finish up to your liking. With the heel made in this way I believe the horse will travel better and receive less damage to his hock back sinews or fetlock joint than with the heel turned up the other way. You will see horses having long, narrow feet; with such feet they generally throw most of the weight on the outside of the foot, and the foot being usually so very narrow at the heels in such cases that it appears difficult for him to walk when unshod, and he will not travel far without becoming lame: such feet seldom grow naturally in this manner, but have become so from disease or some other cause. In fitting up a shoe for such a foot, be careful to have the toe calk (if you put any on,) in the centre of the shoe or a little more, if any, to the side he leans on. It would be well for you to widen out the heels of such a shoe, more particularly the one that he leans out on, as they mostly always pitch on the outside of the foot, it may not, therefore, be necessary for you to bring out the inside

heel much, or maybe none at all, it depends upon the form of the foot and the way the horse throws his feet in traveling. Some horses if the inside heel was widened out they would tread or cut themselves while traveling. If you have to widen out the heel of a shoe bring it out so that it will be plumb or even with the outside of the foot, which you can best see by looking down along the side of the leg and foot. It will always be best to shoe such a foot in the manner I have explained; the horse will travel better, safer and easier, the foot will come down more level on the ground and will be better supported than if shod with a shoe having the heels almost touching, which also makes the foot more liable to be strained. If you have a horse with diseased or deformed feet, I would advise you always to go to the best shoer you can find to have him shod, he will know the kind of a shoe best adapted for the foot.

A flat foot will require a shoe having a wide web, because the sole of such a foot, being generally thin and weak, requires to be protected from being injured on hard and rough roads. The crust of such feet being weak and brittle, you must have the shoe pretty stout, so that it will not bend or give when the weight comes on it. If the shoe is too light for such a foot it would be painful and injurious to the horse as long as it would remain on him. You must be careful to have the shoe well seated all around on the foot—to have it bear level and evenly on all parts of the crust. The web of the shoe being wide, in fitting it you must not let it rest on the sole, for it being thin and weak, the pressure coming on it would bruise it, and it would be almost as painful for the horse to walk on it as if he had no shoe on at all. But, remember, do not have the web of the shoe raised much off the sole, just have it so that it will not press on it; if you would raise it too much off the sole you would thereby leave room for dirt, coarse sand and small stones to enter under it, which would bruise it equally or if not more than if the shoe pressed upon it. It is often necessary in shoeing flat and tender footed horses, and in many diseases of the foot, to have a covering put on the sole for protection. A piece of gum, such as is used for the joints of steam pipes, &c., is very good, or a piece of sole leather, or a piece of waterproof felt, would do very well; and if you have nothing else handy a piece of an old boot leg will do. I will now tell you how to fit the covering to the foot. Take

the shoe, after you have it fitted and ready to nail on the foot, and lay it on the covering, with the heels of the shoe even with the edge of the piece ; mark the form of the shoe upon it with any pointed instrument ; after having marked it, lift the shoe off and cut the piece out according to the mark. Now, get pine tar (not gas tar, for that will make the foot hard and brittle); you may mix with it a little grease or fish oil ; spread it all over the sole of the foot; then you must fill in between the frog and the crust on both sides with oakum or something similar, on a level with the frog on each side ; put some in the cleft of the frog, it will prevent the dirt from getting in ; connect the oakum that you have put in the cleft with that you have on the sides; it will therefore prevent it from working out behind. Now place the leather on top of the filling and nail the shoe on as if there was nothing under it. This will be a great means of restoring the foot to a good, healthy condition ; it will soften it, and thereby encourage it to a sound and vigorous growth. You will perhaps see horses having a split or crack running down the front of the foot ; in bad cases the hoof will be split open from the coronet down to the toe. When a foot is in this condition it is difficult for the horse to walk, and it may get so bad that he will not be able to walk at all, or even press his weight upon it until it gets better. Therefore, to keep the crack from spreading, and from the sides of the crack moving upon each other, and from dirt and other matter getting into it, we must have some kind of a shoe made that will help it as much as possible. I have made shoes for such feet, as follows : Make the shoe and fit it to suit the foot in the usual way ; now forge out two straps (out of good iron) about five-eighths of an inch wide and an eighth or something less than an eighth of an inch thick ; have it a little wider at the end, where you will punch a three-eighth hole for a bolt. Now get a small strap or piece of twine and measure from the quarters around to within about five-eighths of an inch of the centre of the hoof and about half way between the toe and the coronet. Have the end of the strap turned down at the holes nearly square ; you will then measure them off to the proper length, allowing enough for the weld on the shoe ; you can have the straps a little thicker at the ends, so as to allow for the waste in welding. Having all ready now, you will weld them on each side of the shoe at the quarters, remembering to hold them at an angle, so that when they

are bent around they will meet at the proper place on the hoof. Now, having them welded on, you will bend them around to what you think is the shape of the foot. Now put the shoe on the foot and see does it fit to its proper place, and if it fits you will then heat the straps and let them cool off; they will be softer then and can be bent and fitted exactly to the foot after having the shoe nailed on, if you have not got them bent exactly before putting the shoe on. In fitting the shoe do not let the straps press too tightly against the hoof near the sole; it would bind and squeeze the foot too much, and would, therefore, be painful and disagreeable to the horse. Put a five-sixteenth bolt through the straps and draw them up until they press *lightly* and close around the foot. You must be careful not to screw up the bolt too much, for by doing so you would have the straps pressing too tightly on the crust, which would not do. If you put any dressing on the crack for treatment, you can cover it by putting a piece of leather or canvas between the straps and hoof; it will help some to keep the crack moist, and also will do some good by keeping out dirt, &c. I have used these shoes on horses having cracks in their feet with very satisfactory results. Another way of fastening or keeping together a split hoof is to bore two holes on each side of the crack and put long nails through the holes and clinch them tight, applying at the same time a mixture of turpentine, pine tar and whale oil, or some other good foot ointment that may be suitable for the purpose. If the foot be very hard and brittle rub it with a mixture of spirits of tar, two ounces, and fish oil, four ounces. This is a very penetrating mixture for softening feet, and where you come across hard and brittle feet of any description it is very good to apply to them.

There are horses that strike their leg with the opposite foot, which consequently causes a deep and ugly wound, and from the continual striking makes it very disagreeable to the horse while traveling. The striking is done in such a variety of ways that it is almost impossible to form a shoe that will suit every case of cutting. If then you are going to shoe a horse that "cuts" either before or behind, you will want to know what part of the shoe strikes. To find out this, get a piece of cloth or leather, or something of the kind, and fasten it around the place where he strikes, put some clay or anything else that will stick to the shoe, on the covering at the place where he strikes, and then trot him along the road; he will soon pick off some of the

stuff with the opposite foot, thereby showing you the exact part of the shoe he strikes with, which you can alter in the new shoe. If the heel of the shoe strikes you can easily remedy the matter by keeping the shoe well in and beveling or rounding off the part that strikes. If there are no calks on the shoe and it strikes, you will also have to keep the heel of the shoe well in and have the edge rounded off so as to keep it as far back as possible. When a horse travels "close" you must be careful not to let the shoe project beyond the hoof, and also to have the clinches of the nails well closed in and rasped off so that they will not be above the level of the crust, for it is often the case that horses cut with the clinch of the nails, or the hoof even, instead of the shoe. It is nearly always a very small matter that causes cutting, and you would be surprised to see what a little change in fitting the shoe would hinder it. After you have the shoe nailed on, if the leg be cut or swollen, you may tie a piece of old canvas or something, of the kind around it and apply some good healing liment to it, and it will soon heal up if the shoe does not strike it again. Cutting often arises from some malformation of the horse or from some peculiar way of traveling; in such cases there will be no way to remedy the matter but by having a "buffer" fastened on the leg, or you can have a boot made to buckle on the leg, reaching from the knee to the fetlock. If you cannot make any alteration in the shoe to keep the horse from cutting or interfering, there is no remedy that I know of, but to keep the leg protected by a boot or pad.

Overreach is another disagreeable and annoying fault that some horses have; it is caused by the toe of the hind foot striking against the fore foot, which produces that disagreeable noise that is termed forging or clinking. Many persons imagine that the horse strikes the toe of his hind foot against the heel of his front foot; but it is hardly ever the case; it is caused by the shoe striking in between the sides of the front shoes, near the centre of the foot. It is very unpleasant while driving or riding a horse to hear that continual clinking sound. To prevent it you will round off or bevel the rims of the hind shoes around the toe, and you may put narrower shoes than usual on the front feet, providing the sole of the foot be good and strong; chip or hammer off the corner or edge of the shoe at the sides, *on the inside and ground surface*. If after being shod the above way he still strikes or forges, you will have

to keep the hind shoe back on the foot, letting the hoof project beyond it around the toe; the noise will then stop, because the hoof will touch before any part of the shoes can come together. Overreach may be occasioned by the horse not being broken as well as he ought to have been, or it may be occasioned, too, by him having very high hind quarters and low fore ones, and it also happens sometimes from the result of bad shoeing; if so, it is very easily remedied by a careful and proper fitting of the shoe. I will close this subject now, having said all that I believe to be necessary, and proceed with another one, which is the fitting of the shoe, a matter of first importance in shoeing.

Fitting the Shoe.

Fitting a shoe on a horse's foot is a part of the shoer's art that requires more than ordinary attention, and you have to be very particular in more ways than one, in order that you may have it put on well, and in a finished and workmanlike manner. No matter how well you may have the foot prepared to receive it, still, if you have the shoe put on in an inferior manner, it will not look well, and all the care and attention that you may have given to the foot will be of no credit to you in the eyes of the public, because people always look at the *outside* appearance first, and, therefore, if the appearance of the shoeing does not impress them favorably, you are at once put down as being "not much of a shoer," although, at the same time they may not know the difference between good and bad shoeing; but still, in a business point of view, their opinion thus expressed may be an injury to your business. So, even if it were for no other reason than that, you should always try to make the shoe fit the foot as neatly and correctly as possible. And not only is it the looks that require attention, but it is *actually* necessary that you make the shoe fit the foot in *every* respect in regard to size, shape, fitting, and every other particular.

I will now suppose that you have the foot ready for fitting the shoe on it. You will now choose a shoe that will suit the condition of the foot and the particular kind of work the horse will be engaged at. As I have said before, if the foot be a strong, good-shaped one, it will be very easy to find a shoe that will suit it; almost any ordinary

shoe will do if it is properly fitted. But if it be a weak, flat foot, you must be careful to have the shoe strong enough, so that when the weight is thrown upon it there will be no fear of its springing or bending. Having chosen a shoe that you think is about the right size and suitable in every way, you will then hold it on the foot so as to see what is to be done to it, in order to make it fit properly. If you are going to put on a flat shoe, one without toe or heel calks, you will commence by fitting the toe of the shoe first, which ought to be done with all shoes. Now place the toe of the shoe in the fire, and if you are going to turn up a clip at the toe, when it is hot enough take it out and hold it on a corner of the anvil, at the toe, and draw it out with the hammer, so as to form a stout and neat clip. In hammering up the clip keep the corner or edge of the shoe at the top as square around it as you can, for in hammering it up you may leave a hollow in the toe of the shoe, under the clip ; of course it does not do the shoe any injury, but still, after the shoe has been nailed on, it would look better to have the rim even and regular all around.

Having turned up the clip, leveled the shoe all around, and hammered down the pritchel burs at the nail holes, you will then stick the pritchel in one of the *outside* holes of the shoe, then place it on the foot in its proper position, with the clip pressing up against the toe. If you have not previously cut out a place for the clip, the shoe will be sufficiently hot to mark where you are to cut it. Having a place cut out, put the shoe on the foot again and press it at the toe, so that the clip will be well seated, and so as to leave no holes or "wants" in the crust on either side of the clip. If the shoe fits the foot properly around the toe, the next thing for you to do will be to cut off the heels. Now, you must watch and not cut them off too short, for it is easier for you to cut them again if they are too long than for to draw, and, worse yet, perhaps, spoil the shoe. Now, after you have cut off the heels to what you think is the right length, you will then close them in to the shape of the foot, but before closing them in cut off the corners, both on the outside and inside of the shoe; a half-round chisel of about an inch in diameter would be a very convenient tool for cutting off the heels with, because with one cut of it you can make them to the proper shape. And I may remark here, that when you are fitting a shoe, have the outside heel just a little longer than the inside

one, because the outside heel of a horse's foot being longer than the inside one, it therefore requires the heel of the shoe to be a little longer also. You will see horses that wear their shoes short off at the toe, when the other parts of the shoe will hardly be worn any. It is customary to weld a piece of flat steel on the toe of such shoes, and after the shoe has been fitted to the foot, to heat it again and plunge it into the water, thereby making the steel as hard as possible, for the purpose of making the shoe last longer. It may do well enough to weld steel toes on the shoes of horses which have slow work and hard roads to travel over, but I don't believe in welding them on the shoes of horses that have light and fast work to do. I will tell you the reason why. We all know that horses go better and stumble less in old shoes (providing they have not been on too long, when the foot likely will have grown too long for the shoes) than they do in new ones, because the toe being worn away, it no longer jars the foot by striking against the road; therefore, it is plain enough that a horse that wears his shoes hard at the toe will not travel as well with a hard lump of steel on the toe as he will without it. And again, a good iron shoe will last as long on a horse as it ought to be on, for when it is worn out at the toe, on taking the shoe off you will generally see the web of the shoe next to the foot grooved or worn in by the crust, and then it is about time the shoe was off anyhow. I never heard that it was of any benefit to the horse that steel toes were welded on shoes, the principal reason is, I think, that it is to be saving on the purse of the owner, in preventing the shoes from wearing out so soon. My opinion is then, that it is better not to put steel toes on shoes, *particularly* on shoes for *fast* horses. When you are fitting a shoe for a horse that wears the toe off short, it is a very good plan to bend or turn up the toe of the new shoe from the ground, to nearly the shape of the old one; he will travel easier and better on it from the time it is put on, whereas he never traveled well on the old one until the toe was worn away. Turning up the toe makes the shoe last about as long as if there was steel on it, and, moreover, saves the horse from the jar and hard knocks his foot would receive if the toe was hard and flat on the ground. Rasp-ing or paring down the toe of a good strong foot to suit the "turn-up" of the shoe will not injure the foot at all; but there are some feet that have such a thin crust and weak sole that it would not be advisable for you to pare

any off at the toe; with such feet you will have to leave the toe of the shoe flat, even if he does wear hard on it. Remember, there is no particular necessity for turning up the toe of any shoe, except for horses that wear hard on the toe and who have fast work to do also. Horses do not generally wear as hard on the toe of their hind shoes as they do on the fore ones, and you will hardly ever need to turn them up. I don't believe either that there is any necessity for turning up clips on the toes of light flat shoes having neither toe nor heel calks on—although they may be turned up on the hind ones, for they are more apt to be driven back on the feet than the fore ones are. But it is mostly a matter of fancy; it don't make much difference whether you turn clips on such shoes or not. On shoes for heavy draught horses, and I might say on any shoe that has heel and toe calks on, I believe that it is always best to have a good strong clip turned up, both on the fore shoes and the hind ones.

If you are going to fit a shoe that is too wide for the foot at or across the toe, and too narrow at the heels, you may proceed to bring it to the right shape according to the following directions: Put the shoe into the fire, and when it is heated all over take it out, holding it near the toe; place it over the beak of the anvil with the heel resting edgewise on it. Now hold it in this position while you strike it from the centre of the toe to about half way on the side; turn it then and do the same with the other side. It will be too wide now, both at heel and toe; you will now hold it up edgewise on the face of the anvil, and close it together until you think you have it to the right width at the toe. Now level it on the face of the anvil, and stick the pritchel in a hole on the outside rim—if it be very hot yet, dip it in the water and cool it off a little, bring it now to the foot and see if it fits properly at the toe; if it does, all you have to do then is to take it to the anvil again, and close in the heels to suit. That being done, level it off, and see that the nail holes are large enough for the nails, and that there are no lumps or burs around them. All this being done now, and you have the shoe to fit the foot evenly all around the crust, you can then cool it off, and nail it on to the foot.

If a shoe is too narrow at the toe for the foot, all you have to do is to heat it all over, and place it on the beak of the anvil, then strike it on the centre of the toe until you have it wide enough, having it wide enough at the toe

you will still hold it across the beak and bring in the heels to the proper shape.

If a shoe be too narrow both at the toe and the heels, you can widen it by heating the toe and placing the shoe flat on the face of the anvil, putting the tongs in between the heels and with the jaws of the tongs resting on the toe. Now you can spread it out in this way to any width you wish, or you may widen it by placing it across the beak of the anvil and striking it on the toe. If a shoe be too narrow at the heels, all you have to do is to hold it across the beak of the anvil and strike it on each side until you bring them out to the right width. With these few remarks I believe that I may close the subject of bringing shoes to the right shape, for I feel that I can't explain it any better without having the tools to assist me, but you will bear in mind to fit the toe first, and then you will not have much trouble with the heels. If the shoe be the right size for the foot, by taking good notice of the shape of the foot, it will be an easy matter to bring it to the right shape. There are a great many smiths, and others, who believe very much in what are called "opened heeled shoes," which means shoes with straight heels, wide apart and projecting beyond the hoof, both behind and at the sides. Some will have their horses shod with such shoes, no matter what kind of foot the horse may have. I don't believe in putting such shoes on *all* kinds of feet. You will see horses having very low heels, and sometimes along with that you will see the fetlock or pastern joint, when he is either standing or walking, thrown back and low over the heels; he don't stand with that easy and upright way that a horse does who has well shaped legs and feet. A horse having such feet I believe it is well for you to leave his shoes project out a little behind, and if his heels are narrow to let them project out a little on the sides too. When shod this way it will raise his heels to a better and more "natural" shape, and will assist him in walking and bringing his feet more leveller to the ground. I have seen horses having such feet, and the heels of their shoes would wear out as fast as the toe and sometimes faster. I have also seen shoes of the ordinary length put on such feet, and they have had to be taken off and longer ones put on, after which the horse would travel a great deal easier and pleasanter. I will quote from "Miles' Treatise on Horse Shoeing" what he says about opened heeled shoes: "The only reason I have ever heard in favor of

such shoes is a very bad one, viz : that the horse requires more support at the heels than he gets from the hoof, but you may depend upon it, nature has made no mistake about it, and if the horse really wanted more support than he gets from the heels of the hoof he would have had it
* * * * * it interferes with his action and exposes his sole and frog to serious injury from stones in the road, and the projecting portions of the shoe become ledges for stiff ground to cling to and pull the shoe off. More shoes are lost through these mischievous projections at the heels than from all other causes put together.

* * * * * If you wish to avoid these evils and keep the horse's shoes on his feet you must bring in the heels and let the shoes strictly follow the form of the foot, whatever that form may be. * * * * *

Opened heeled shoes leave the frog entirely exposed to very large stones and are the cause of many a severe bruise to the navicular joint which lays the foundation of future incurable lameness. * * * * Another

great advantage of bringing in the heels and fitting the shoe is the certainty that the horse will not cast his shoe, you lay nothing for stiff ground to lay hold of and if you slightly bevel the inside quarter and heel of the shoe from the foot downward, as is sometimes done to prevent a horse from cutting, no ground in the world can pull it off, for the foot expanding to the weight of the horse enlarges the hole made by the shoe and leaves more space for the shoe to come out of than it made for itself to go in at ; but if the shoe projects beyond the hoof at any part, and more particularly at the heels, the foot cannot fill the hole made by the shoe, and stiff clay will cling round the projections and pull the shoe off."

The foregoing extract I believe mainly to be correct—all but with one exception, that is where he says "if the horse really wanted more support than he gets from the heels of the hoof he would have had it." Now we all know that there are horses having such deformed feet that if there was to be a shoe fitted *exactly* to the shape of the foot it would be difficult for the horse to get along. As I have before remarked. there are some feet that if you were to only make the shoe to the length of the hoof the horse would not travel easy or comfortable until you would have it taken off and a longer one put on. There are other feet so narrow at the heels that if you would bring the heels of the shoe in to the shape of the foot, they would

almost be touching together. You will also see horses having very low heels, and sometimes along with that you will see the fetlock or pastern joint, when he is either standing or walking, thrown back and low over the heels—he does not stand with that easy and upright way that a horse does who has well-shaped legs and feet. A horse having such feet I believe it is well for to leave his shoes project out a little behind, and if his heels are narrow, to let them project out a little on the sides too. When shod this way it will raise his heels to a better and more "natural" shape and will assist him in walking and bringing his feet more leveller to the ground. There are horses having such flat and curled feet that if you were to put shoes of the ordinary length on them they would go along in a hobbling and rocking manner, wearing out the heels of the shoes faster than the toes. Such feet will have to be shod long, after which you will see that it improves the horse's gait and he goes along much easier and pleasanter. Therefore you will see it will not do to make a shoe fit the exact shape of every kind of a foot. There are special shoes required for some particular kinds of feet, which only can be made and fitted by an expert.

While not being in favor of shoeing with opened heeled shoes, still a horse may be shod with them without receiving any immediate injury, providing there be good roads for him to travel on. Horses that work in mines, I positively believe it to be wrong to have them shod long and wide at the heels, because it endangers the horse to be killed or crippled by having him shod in such a manner. I will tell you why: horses working in mines generally see but very little from the light of the lamp; the roads are very rough in some places, and very often they have to haul loads over roads having no filling in between the ties. Again, the great speed they are sometimes driven at, and the short turns and narrow places that they have to go through, together with the great number of switches and crossings they have to travel over, place the horse in danger of having his feet fastened in hundreds of places if shod with shoes projecting at the heels. I have shod mine-horses for a number of years, and therefore have had every opportunity of seeing this matter fully tested.

Toe pieces for shoes can be made of half-inch square iron or steel, more or less, according to the size of the shoe. Large heavy shoes that are used on hard roads

will require a heavier toe. To make the toe piece, about as good a way as any is to have a rod and turn down a square point on the end of it about half an inch long, then cut the piece off from one inch and three-eighths to two and a quarter inches long, which can be ranged in lengths according to the size of the shoe. You can also weld the toe piece on from the rod which will just do as well, and some prefer the latter way, because if the point of the toe piece that is driven in the shoe be not properly welded, it will weaken the shoe there, thereby making it more liable to break at that place.

To weld the piece on the shoe : Having the shoe hot take it and place the toe flat on the face of the anvil with the side next to the foot uppermost, now draw out the toe a little with the pane or ball of the hammer (do not draw it much or very thin for it would burn off in the fire while taking the heat to weld the toe on), then turn the shoe upside down, with the toe resting flat on the anvil and stamp a hole with the pritchel on the right hand side, be careful when you stamp the hole to have it so that when the toe piece is placed on it will be in the centre of the shoe, being not more on one side than the other. Now take hold of the toe piece with the tongs and place the turned down point into the stamped hole in the shoe and hammer it down through over the small hole in the anvil, turn the shoe upside down again and strike it at the place where the point has been driven into it, then level it down and set it square on the shoe, and it will be ready for welding. Place the shoe in the fire with the toe piece underneath, and when having a welding heat on it take it out with the toe uppermost and place it flat on the face of the anvil, then weld the toe piece down. While yet having a welding heat on it, bring the shoe quickly across the beak of the anvil with the toe square on the top and strike on the rim of the shoe at both ends of the toe piece, you will have them welded solid where the toe piece was stuck into the shoe, next bring it on the face of the anvil holding the toe even with the outside edge of the anvil and the part that you have previously drawn a little (for the purpose of a clip) projecting over the edge, and you can strike it down square over the edge with the corner of the face of your hand hammer, you may bring it to the beak again and hold it across as before, giving it a few blows to bring the clip down, bring it and hold it on the inside of the anvil with the clip uppermost and resting close in

against it, draw the clip out now with the face of the hammer, level off the shoe and turn up the heels, and you have it finished.

In welding the toe piece on from the rod you will have to cut it around slightly to the length required, previously to welding, as then the rod can be broken from the toe piece after it is welded to the shoe. Of course you will not need to draw out the toe of the shoe previously to welding the toe piece on, except you want to turn up a clip on the shoe.

Be sure that you have the nail holes large enough, and the groove wide enough so that the nails will go well down into the shoe, it looks bad to see the heads of the nails projecting up *too* high above the level of the shoe. It would be well for you to have the cutting edge of the fullering iron slightly rounded off, it will prevent the shoe from splitting so easily between the holes.

In opening the holes out it would be well for to let them incline inward, not for the purpose, though, of setting and driving the nails slanting, for the nails should be set in the centre of the holes and driven straight through so that the foot may not be cramped or forced out of its natural shape. But the crust may be broken, or it may not have the proper degree of obliquity backward, which in sound and well-formed feet is generally at about forty-five degrees, when it is more oblique and the crust sunken or said to have "fallen in," then it is well for you to have the holes to incline inwards, for the reason that you will then have a chance to set the nail in any manner you wish in order to bring it out in any desired place in the crust. If you had not the holes opened out in such a way, very likely you could not set the nails to go as low down as you want them to go. Therefore let the nail holes incline inward a little so then you can set the nail to any degree of slanting that may be required, but unless you can't avoid it, always set the nails plumb and drive them straight through.

When fitting the shoe and while yet sufficiently hot you slightly touch the crust to mark any inequalities that may have been left after paring, so that then you can see exactly where the uneven places are; and more particularly if you have a clip on the shoe you can then have it well seated in at the toe better and neater than you can do it with the knife. If you have pared the foot properly and made the shoe perfectly level you will not injure the hoof

by touching it with a moderately hot shoe. It is a mistake to suppose that it will harm the foot any. I would not have you to burn it into the foot after having been paired down. That would be entirely wrong, and should never be done. Then all you have to do (if it needs to be done at all) is merely to scorch the hoof so that the shoe may be closely seated. So when you have it fitted in the manner that I have endeavored to explain—when the shoe and the foot fits together close like the leaves of a book—then I think you have done all that is required to be done in fitting a shoe, and therefore you may proceed to nail it on.

Setting and Nailing on the Shoe; Also, the Size and Number of Nails to be Used.

In nailing on the shoe the first thing that you will have to see to is that the shoe fits the foot properly. But you may have the shoe fitted as well as it can be, still by a little carelessness your good fitting shoe may be all out of shape if you be not careful in setting it on. It is a very common occurrence for shoes to be set crooked, sometimes, it happens, through carelessness, but oftener by being in a hurry to get through with the job. If the shoer, after having driven the first nail or two, then discovers that the shoe is not set exactly as it ought to be, he will hardly go to the trouble of drawing the nail or nails and setting it over again; he will very likely say (to himself) let it go, it will do good enough, and so he will finish nailing on the shoe as it is, just as if everything were all right, and so it will be, to every one but himself, for it is very seldom noticed. But even if it be not noticed it should not be done, for the right way is the best way of doing anything. Be sure to have the nail holes in the shoe large enough, then if you have good nails it will require but very little skill to nail it on. Set the shoe straight on the foot and then drive a nail. After you have the first nail driven take notice if the shoe has twisted around any. If it be even with the crust, be set straight on the foot, and be in its proper place, you may then drive a nail in the other side of it. Now, having two nails driven, one on each side, you will then have it secure to its place on the foot, and you may then drive the balance

of the nails all around. Before proceeding any further in the matter of nailing on the shoe, I think that it would be well for me to say a few words in regard to the nails, believing at the same time that anything I might say in regard to making nails would be of no practical use, because I do not think you will find one man in fifty that can make a nail that is fit to be used, except a man that has had good practical experience in making them, and even a good many of those who have had years of experience make a very inferior nail. A young beginner at blacksmithing thinks that he has done a wonderful job when he has made a horseshoe nail. He thinks that he is getting along "right smart" in the business, and that he will soon be able to shoe a horse and make a nail as good as the next. But, however, the nails should be made from the best Norway or Swedish iron nail rod, and not allowed to cool too quickly. Let them drop around loosely on the floor to cool gradually. They should be made rather broad and not too thick, so that they will turn over easy in clinching and not tear the hoof. If you have them thick and heavy (except you want them for use in a large and strong hoof which would require a good stout nail) in turning over the clinches the crust under the clinch would be drawn down, and consequently there will be a small hole in the hoof above each nail which will obviously take away some support from behind the clinch, thereby leaving it more liable to raise up. Horses having small feet and a thin crust will have to be shod with a light nail, because if you were to use heavy nails in such feet they would tear the crust when turning the clinches, and also would probably press against the inside or sensitive part of the foot, but your own judgment can direct you in this matter, for you are well aware that it will not require so large a nail for a horse having a small hoof and a thin crust as one having a large hoof and a thick crust.

Every shoer ought to know how to make a good nail, just as much so as to know how to make a good shoe, although there is no necessity now of making nails by hand, for the machine made nails that are now manufactured (those of the best makers) are as good in every way as can be made by hand, in fact they are better, for the reason that they are more uniform in size and better finished than those that are made by hand. There are all sizes that are required made, and it is also cheaper to buy them ready made than for to make them by hand.

In pointing nails you should not bevel them off too short on the point, for by doing so you would have to set the nail leaning outward to bring it down low enough in the crust, which setting of the nail might cause it to take too deep a hold in the foot for it to come out in the place that you would want it, thereby causing it to be too near or actually pressing against the quick or sensitive part of the foot, which would cause the horse a great deal of suffering and uneasiness. As a rule bevel the nails long, set them straight, and they will come out in the right place if the foot be well formed. It is well known that there are great variations and local peculiarities in the feet of horses which will require corresponding changes in the design of the shoe, in the placing of the nail holes in the shoe, in the number and size of nails to be used, and in setting the nail in the hoof so that it will come out at the proper place. In all such variations you will have to be guided principally by your own judgment as to what will be required in each particular case. Do not hammer the extreme end or point of the nail too flat or thin, because when driving it the point would be apt to curl up, and then instead of it coming out of the foot it would just be as likely to turn into it, and if the latter was the case, you would surely then be bungling things.

All nails that may be split or have flaws of any kind in them I would advise you to throw them away at once. Don't use any but good, clean, sound nails. All others are not safe to use.

After you have the nails all driven, the next thing for you to do will be to draw the clinches. If the foot be sore or tender, or if the crust be thin and weak, it will not do for you to tighten them very much, but if the hoof be hard and sound you may draw them quite tight and need not be afraid of injuring the foot. Now, after having drawn the clinches, if you are not in any great hurry, you may let the foot drop and straighten your back, which by this time may feel a little "kinked," particularly if you are subject to any degree of weakness in that locality. Try to have the nails come out evenly around the hoof, on a straight line one with the other, and the same distance apart. It looks better and more mechanical to have them this way than to be scattered up and down in every direction. File the clinches down short, and under each clinch file a slight notch for it to turn into. Be careful not to file the clinch half across when you are filing

under it, which is very often done in careless shoeing. Now, turn them over with the hammer, bringing them closely into the hoof. I say turn the clinch over with the hammer, for there are contrivances made for pulling or drawing them over, but you cannot get anything that will turn over as good and as close a clinch as the hammer. Therefore I would advise you to use it in preference to all other "machines." It is more readily handled and will give more general satisfaction in the end. Having the clinches turned down, rasp the hoof below them evenly with the shoe. Do not rasp much on the clinch, for by doing so you would very quickly cut it through at the bend, thereby causing the nail to be almost perfectly useless, or if not cut altogether through would perhaps be so thin that it would only have the appearance of a clinch. The hoof need not be rasped above the clinches. There is no necessity for doing it, except that there may be some slight irregularities on it, then, in such cases, it *may* be slightly rasped all over. Rasp all over the foot makes it "shine" and look nicer, but that is all the advantage it is to the foot. If anything, it is conducive to injure the foot, for it takes off the outer covering of the hoof, which causes the crust to become brittle and hard. In a word it leaves it entirely exposed for the natural moisture and toughness to leave it.

In changing the foot from one side of you to the other you should not turn facing the horse, but turn with your back to him, changing the foot behind you, then if he jerks his foot from you he is not so apt to injure you, and besides you can hold on to the foot better.

In regard to the number of nails to be used in a shoe I would say that eight nails is enough to hold on any shoe, if shod with suitable nails, no matter how large it may be, and is properly fitted. Seven or five nails would be sufficient to hold on the shoe of any horse that would have light work to do, always placing the less number on the inside of the foot to prevent any possible binding, and also to leave the inner quarter and heel free for any expansions that may be.

There are some who assert that five nails are sufficient to hold on a shoe at *any* kind of work, and even that *three* would be enough. Well, we can take this idea for what it is worth, but I do not altogether believe in it. I would have at *least* five nails in any shoe. Horses that have small feet, and, as I have remarked, that may have light

work to do, seven or five nails will hold on their shoes if they are well put on until they are entirely worn out. But heavy horses, having good sound feet and hard work to do, nail their shoes with eight nails of a suitable size, and if they be well put on they will stay there until they are worn out, or until you want to have them removed.

I will now suppose that you have just shod a horse. Therefore I have every reason to believe that if you have followed the principles and practices of shoeing that I have laid down I feel no hesitancy in saying that you will not be far wrong in considering that you have performed your work well, and done all that is necessary to be done, in order to do good shoeing.

On Whipping and Abusing Horses

While Being Shod, and also Ways of Holding and Managing Them While Shoeing.

Before lifting a horse's foot to prepare it for shoeing you must be resolved that you are going to put the shoe on, no matter how vicious or contrary he may be. Some men have a very bad habit of leaving the horse drop his foot if he only gives a few slight jerks or exhibits any signs of fright or uneasiness. Of course there are horses that are so extremely vicious and stubborn that it is almost impossible to shoe them without tying or holding them in some way, but they are few in number, and the extremely bad ones are probably not more than one in a hundred. There are other horses again that are not so bad, but still they require watching, and you should be careful while shoeing them.

If you are going to shoe a horse that you don't know anything about you can inquire of the party who brought him to you whether he is gentle or otherwise, and likely he can tell you. If he be hard to shoe you must be on your guard while shoeing him, but don't be afraid of him, for if you do he will know it quite as well as yourself, and then as a natural consequence, instead of standing gentle and quiet, he will be getting cramfull of all manner of contrariness. If you know, then, that a horse is contrary and hard to be shod, don't hold on to his foot too much if you see that he is determined to take it from you.

Better a great deal let his foot go than to run the risk of being injured by holding on to it, for if he is *determined* to put his foot to the ground you cannot hold it up, and there is no use in trying to. But remember, you must not let him have his foot at every little jerk or move that he makes. It learns him a very bad habit, and if he once gets into it he will always want to take his foot from you while you are shoeing him, and therefore, instead of getting better to be shod, he will be steadily getting worse. And let me tell you that it is this thing of letting horses feet go so easily, particularly for the first few times that they are being shod, that helps in a great measure to make them hard to be shod afterwards. Therefore, while you are shoeing have patience, courage, and thorough good temper, for by having these dispositions you will have a great deal better chance to get along with him with more satisfaction than to be timid and impatient. There are a great many while shoeing a horse or mule (particularly the latter, for they are generally the most contrary) whip or club them cruelly and unwarrantably. I am aware that it is very hard sometimes to hold one's temper when they come across a contrary horse or mule, particularly when you are pulled and jerked around the shop or yard until you are really tired of it; one would almost require to have the patience of Job to put up with it, yet you must remember that beating some horses and mules does not do them a particle of good, in fact the more you beat such untractable specimens the worse they get. Others again will stand very quiet after having received a moderate whipping. But then if kind words and gentle treatment will be of no avail you will be compelled to resort to some other means of compelling them to stand quiet, or, if necessary, lay quiet if they will not stand. So, in order that you may be better enabled to feprove them more efficaciously for their stubborn and refractory disposition, I will give a few directions as to handling under such circumstances: Should the horse refuse to have either of his hind feet handled, he may be made to submit to your handling, or as much so that you can put the shoe on him without much fear of him seriously kicking you. Get a good stout strap or sufficiently strong chain and tie one end of it around his neck in a loop, then pass the other end around his fetlock and up through the loop on his neck; you can then pull on the end just put through the loop and thereby bring the foot up off the

ground as high as you want it. Have some one to stand at his head holding with one hand the bridle and with the other the rope chain or strap that you have the foot held up by. Having the foot held in this manner you will be able to get the shoe on quite well. But, in the position of the foot, you may not turn out a fancy job, still under the circumstances it will be sufficiently well done. It may be in some cases that in order to control horses that are outrageously vicious and uncontrollable that they may have to be thrown, so as to more effectually subdue them while shoeing. To make a horse lie down then you can proceed as follows : Bend his left fore leg up and then slip a loop over it, or have a strap and buckle it across so that he cannot let it down. Then put a girth or strap around his body. Now, fasten a strap to the other fore foot above the hoof, and then pass the end of it through the strap that you have around his body. You may have some kind of a fastening or ring attached to the girth for to pass the rope through that is fastened to his foot, so that the rope will be kept in the right position when pulling. You will now stand on the left side of the horse. Take a hold of the bit with your left hand, and with your right pull on the strap that is attached to his right foot, at the same time bearing against his shoulder steady and strong until you cause him to move, then when he takes his weight off his foot your pulling will cause him to come to his knees. Now, having him brought to his knees, you will still keep the strap tight in your hand so that he cannot straighten his leg if he attempts to rise. Be gentle with him now and hold him steady, at the same time bearing against him and drawing his head in toward you. Having him in this position he will soon lie down, and then you may handle him as you please. By having small straps with rings attached to them and fastening one on each foot around the fetlock and then passing a rope through them you can then draw his feet up together and shoe him in spite of his stubbornness. You may also hold him by putting a twitch on his nose, which you can make by getting a stick twenty inches or two feet long, bore a hole in the end of it, and tie a piece of rope in it in a loop ; make the loop about six inches long, put it around his nose, and then twist the stick around until you tighten the rope on him. You may use a tongs too for the same purpose, it will suit generally just as well. Get a medium sized one, hold it ready in one hand, and with the other

hand take a hold of his nose, or, better yet, have some one to hold his nose for you while you put the legs of the tongs across it, when you will immediately tighten it on him. Now, except he be very stubborn or mischievous, you can hold him with it. Do not squeeze too tight on him, but just enough to let him feel it, except that he becomes somewhat unruly, then you may bring him to tame by putting on a little more pressure. Always remember when putting a twitch on to stand partly on one side of the horse, as then if he should strike or rear up you will not stand in danger of being hurt. I have seen horses become furious when they would have a twitch put on them. Some will strike at you with their feet and try to jump on you. Others, again, will rear up on their hind feet. I remember that there was a horse brought to me once to be shod. I was told that he was pretty contrary to manage, so I thought that I would put a tongs on the "fellow" to tame him a little. I had just put it on him and commenced to tighten it when he suddenly, and without any warning, reared up on his hind feet, jerked the tongs out of my hands, sent it flying over his head and fell completely over on his back. So you see that it will not do to be rough or to beat some horses. In my experience I have always succeeded better while shoeing horses to be kind and gentle with them, rather than to be harsh and severe. I would most emphatically deprecate the cruel and barbarous manner in which some horses are used while shoeing. It appears that some men have no limit to their savage brutality in managing horses. When you meet a gnarled and cross-grained groom or blacksmith spare your horse from him, if you value him for the worth that is in him. Such treatment as pulling the tongue out of the horse's mouth and tieing or binding a rope or chain to it, or putting stones in his ears, or getting a log-chain and tieing it around his neck and almost pulling his head off, together with other savage means of coercion, is something that ought not to be done, for, generally speaking, such practices aggravate the horse and terrorizes him so much that in the end such treatment does no good, and besides you have lost a great deal of time and have been put to considerable worry of mind and exasperation that you get no pay for. Stocks are a very good contrivance for holding unmanageable horses and mules while being shod, and if the frame be properly made and well put together you can

easily control them in it. During our late civil war they were very commonly used at the shoeing shops connected with the army for the purpose of forcing those obstinate and mischievous mules into submission when they could hardly be conquered by any other means. I will now endeavor to explain to you a very good plan for constructing one. Get four pieces of oak timber, say six by six inches, and six or seven feet long, or long enough so that when framed or sunk in the ground they will be high enough for a horse to pass under a piece that will be framed on top of the posts to connect them together. Set the posts about three feet apart in width and about six feet apart in length. Have the posts framed on top and connected together all around. Make two rollers of suitable size and put one in on each side of the frame, and on a line about even with the top of the horses' body. Now, in the front of the frame or the place where his neck will be, you must have two pieces of about three by twelve inch timber framed or fitted into a groove on the posts. In the centre of these pieces you will have them cut out in the same shape as a horse's collar, with the larger circle underneath and the small one on top. The bottom piece you must have fastened stationary, and in such position that it will fit exactly under his neck as he stands. The top piece you will have fixed movable, so that you can slide it up and down when required. When bringing the horse into the stocks you will have the top piece raised, and as soon as you get him into the proper place you can let it down across his neck and then you will have him fast. Have a fastening on this movable piece so that the horse cannot raise it up after it has been let down over his neck. Next you will proceed to raise him up. Have a strong wide leather or canvas strap about two or two and a half feet wide with three or four pieces of chains or ropes attached to each end of it to connect with the rollers on each side. Now you will pass the strap under his belly, attach it to the rollers, and then raise him up by turning the rollers by means of sticks used as levers in holes that you will have bored in them for that purpose. As you can now raise him up off the ground, he probably will have to be quiet enough. You may have stakes driven in the ground, or you can have them framed there, just high enough so that his feet can rest comfortably on them. Have the top of these stakes rounded or hollowed out on top suitable for his fetlock,

so that when his foot is placed on it that it will rest comfortably. Have clasps made of stout pieces of leather or a thin piece of iron, rounded off so that it will fit neatly around the fetlock. You will fasten these clasps on top of the stakes, and when you place the foot in position you can then turn the clasp around the fetlock and you will then have the foot firmly secured. It may not be necessary for you to have the feet secured in this way. You may get along very well with him, after having him raised up, without fastening his feet. If he only be bad to shoe with the hind feet it may be sufficient for you to tie one end of a rope around his fetlock and then pull his foot up and back, fastening the other end of the rope to a stake that you can have driven in the ground two or three yards distant from the frame. It would be well for you to have the frame braced on the sides and in front with good stout braces, so that if the horse commences to get enraged after being put in, that it will be sufficiently strong to hold him. It is not often that it becomes necessary to tie or fasten up horses while being shod, and unless it be absolutely necessary I would not advise you to do so, for, subdued in this way momentarily, it hardly ever has any lasting effect on them. Try all gentle means of holding a horse first, and if it be seen that he cannot be held, then of course you will have to resort to any means in your power to conquer him, for it is indispensable that he be shod, no matter how contrary he be.

Remarks

On the Choosing and Taking Care of the Feet, Removing the Shoes, &c.

In buying a horse always pay particular attention to his feet, for a horse with bad feet will not be of much service. It will be a continual bother for to have him kept shod in good condition, so that he will be able to get along and work satisfactorily, as well as the disagreeableness in doctoring and taking care of them. If a foundation be weak and shaky you may undoubtedly expect the structure to gradually totter and fall. So, also, with a horse; if his foundation be weak you cannot expect much service of him. Make it a point to choose good, smooth and tough looking feet, of medium size, free from

cracks or any indications of them, to be clean of all undue lumps or wrinkles, or anything that you might think would grow to mar the appearance or healthy condition of the foot. It is sometimes the case that a horse may have every appearance of having a good sound and serviceable foot, but such may not be the case, for the crust of the foot may be so thin and soft that it cannot endure much hard usage, as well as the liability he is in to be crippled in shoeing, owing to the thinness of the crust, and thereby there is danger in having the nails pressing against or driven into the sensitive part of the foot. You can nearly always know such feet by their fine and weakly outside appearance. See that the heels of the feet be good and sound, the frog in a good healthy condition and the soles dished or hollow. So then if the feet have all these marks you may expect that you will not be disappointed in relying on their serviceableness. The sound condition of the feet of horses is undoubtedly a very important matter with all persons who have anything to do with that useful animal. Very few have a sufficient knowledge of the proper way in which horses feet ought to be attended to, for it is well known that there are a great variety of causes which will subject them to lameness in the feet, more so probably than in any other part and which, if neglected, often leads on to very serious and many times permanent diseases. Therefore the following remarks may be of service: A very important point for which the blacksmith is not answerable is that some persons allow the shoes to be worn just as long as there will be a piece of them left sticking to the hoof. Farmers especially will do this, but still it is not as bad for farmers to do it as for those who are driving over hard and rough roads. Now, it is altogether wrong to let shoes be worn in this manner, for it gives the feet of the horse a chance to grow irregular, it causes an uneven bearing on the sole of the foot, leaves it more liable to injury, and also hinders him to a certain degree from performing his work as agreeably and well as if he had good tight-fitting shoes on. Often you see horses having but one, two or three shoes on; the consequence of letting a horse go in this manner will be to have one hoof larger than the other, which is evidently known that the bare feet or foot will wear down sooner than the ones that are shod; thus often there arises the cause for the remark as commonly heard "Your horse has odd feet."

Again, you may often see horses having their shoes on so long that the hoof will have grown out over them. Now when this is allowed to occur with a horse having weak feet or being subject to corns or other diseases, or weakness of the sole, it then most assuredly is very injurious to the foot. The outside crust or rim of the foot is the place where the bearing should be, and it is therefore very unpardonable neglect to allow the horse to travel shod in any other manner. It is very well to allow horses who have hard, brittle feet to go barefoot a few days occasionally in a damp or marshy field, it will soften the hoof considerably and will also have a tendency to expand the foot, and so far be a preventive of contraction. If the horse have bad and ill growing feet it will also be a great help to him by turning him out barefoot a while, it will soften the hoof and thereby stimulate the growth which is just what is needed in such cases. If in either case or on any occasion, if by turning the animal out you find by doing so that it will be an injury to his feet by too much breakage of the crust or injury to the soles of the feet, then in such cases you will have to do the best you can with him in the stable and apply such remedies as a competent farrier would prescribe. A great deal of annoying evils, and sometimes very protracted diseases of the feet, result from the manner in which the stable is kept. Foul, dirty or badly located stables are a disgraceful place to keep horses standing in; it is a wonder that owners and those having the care of this poor, dumb brute—yet “Man's best and noblest four-footed friend” would allow such to be the case, but some are extremely careless in this regard, and it seems to be that so long as the horse looks well in other respects, that there is not much attention paid to his feet, except when he commences to get lame, and then at once very probably the first thing that will be looked at is the feet to see if the trouble be not there. Then if the lameness proves to be there, the treatment will at once commence—when perhaps it may be almost too late, whereas, by a little attention and foresight all the trouble could have been avoided.

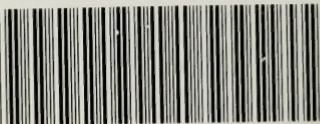
It is a very common occurrence for horses' feet to become diseased that are allowed to stand in wet and filthy stables, and it is no wonder either, for anyone having the least bit of common sense ought to know that it is wrong. The invariable result of such carelessness is that the soft part of the sole and frog become diseased,

the outer coating of the frog becomes partly decomposed, having a soft suppurative and filthy appearance, discharging at the same time an odious smelling matter, consequently the frog wastes away. The protection that it naturally gives to the sensitive organs beneath is in a measure impaired and then very often serious results will follow. Earth floors are generally considered to be the best for horses to stand upon, providing they be kept clean and dry, but as it would take considerable care and labor to keep them in proper condition, wooden floors are mostly used. Horses that are kept continually standing on wooden floors will cause their feet to become dry, hard and brittle, liable to crack or chip off in shoeing—whereas if kept standing on a good earth floor this trouble in a great measure will be obviated. When the feet are very hard and brittle it is a very good plan to give them a "stopping" occasionally—that is, fill the hollow of the foot with mud and cow dung mixed, and leave it there all night. If that does not do satisfactorily you may use the dung alone. In case of *extreme* hardness of the hoof you may use a little salt in the above, but I would not advise you to use it in any ordinary case of hardness of the hoof as it would be most too strong. It would be very well if you intend to have your horse shod to give his feet a stopping the day before, in order that they may be more tough and yielding in the hands of the shoer.

If it happens that a horse's feet are bad—very bad—or, in other words, generally "used up" all around, then in such case it will be well to take off his shoes, then open the heels on each side of the cleft of the frog until you can see the quick. If there be a thick sole pare it down also until it will yield to *hard* pressure of your thumbs; then, if it be grass time, turn him out in a smooth, moist field, free from stones and other rough substances, for a few weeks, or months if you can spare him, and if that don't help him or effect a cure, I would almost be of the opinion that you might "give him up." You need not be afraid that the paring, as recommended, will do any harm, for by doing so you cut away that hard, bony substance which, in such feet especially, is a great hindrance to the free and natural growth of the feet, which in all feet is so much desired, more or less, for when once the feet fall off from a natural growth then you may expect disease and malformation with all their attendant evils to set in.

Relative to the removing of horses' shoes, it will be necessary to remove them when the feet have outgrown the old ones, or when they become loose or worn out. There can be no regular time laid down when horses' shoes should be removed; it altogether depends upon the natural growth of the feet and degree of wear that the shoes are subject to. All horses' feet do not grow alike; some grow a great deal faster than others, and some also wear their shoes out quicker than others, so that you will have to be guided by the circumstances of the case. The condition of the foot has to be taken into consideration. Horses that are employed on roads and hard ground will need shoeing much oftener than those that are used at farming; but unless caused by accident, or on account of some disease or injury to the foot, not oftener than once a month. I believe a shoe should not be allowed to remain on a horse's foot in any case longer than six or seven weeks without being taken off and refitted. With some horses, and in some cases, it would be necessary to have them removed every two or three weeks. I am under the impression that there is no one but can tell when the shoe ought to be removed; both the feet and the shoes, in most cases, will show it, and generally speaking, it will not require any knowledge of shoeing to be a judge of this matter. Even if there was a specified time laid down as to how long a time shoes should remain on certain horses and particular kind of feet, it would all be of no use, for every owner, and those in care of horses, for the most part, have their own peculiar notions about the matter, and therefore they will say themselves what time they shall be removed. And such being the case the shoer will have no say in the matter, but do as he is directed. Finally, I would say, have the shoes removed whenever you think the condition of the foot would require it, let that time be long or short, believing at the same time, without any presumptive feeling on my part, that if you have paid particular attention in reading parts of the foregoing pages, which relate more particularly to the condition of the foot and the shoe, that then you will not require to be possessed of any extraordinary amount of intelligence to be able to determine accurately at what time the shoe should be removed.

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